



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,287	02/20/2004	Ricardo Te Lim	VP113	7613

20178 7590 09/27/2006

EPSON RESEARCH AND DEVELOPMENT INC  
INTELLECTUAL PROPERTY DEPT  
150 RIVER OAKS PARKWAY, SUITE 225  
SAN JOSE, CA 95134

EXAMINER

HASSAN, AURANGZEB

ART UNIT PAPER NUMBER

2182

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/783,287

Applicant(s)

LIM ET AL.

Examiner

Aurangzeb Hassan

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

FRITZ FLEMING

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

9/18/2006

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et al. (International Publication Number WO 03/050684 hereinafter "Tang") in view of Rosenthal et al. (US Patent Number 5,740,406 hereinafter "Rosenthal").

3. As per claims 1, 5, 9, and 13, Tang teaches a method, apparatus, medium, and system comprising: receiving a plurality of consecutive requests to access a memory, the plurality of memory access requests specifying multiple, sequential addresses (FIFO memory circuitry includes (addresses) storage locations for control bits and data bits, lines 6 – 7, paragraph [0034], burst operations transfers data from multiple memory locations concurrently allowing for equating output lines, paragraph [0024]); wherein the memory is identified by the first address(multiple transactions with large amounts of data can arrive in rapid succession, paragraph [0029]).

Tang discloses decompression logic however does not explicitly disclose decoding to produce a decoded address.

Rosenthal discloses decoding each of the multiple addresses to produce a decoded address; and accessing the memory if the decoded address is a first address (column 5, lines 52 – 67, with burst mode, column 17, lines 4 – 18).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Tang with the above teachings of Rosenthal. One of ordinary skill would be motivated to make such modification in order to provide optimal use of FIFO buffers for buffering write operations to a computer system (column 2, lines 20 – 23).

4. Tang modified by the teachings of Rosenthal as applied in claim 1 above as per claims 2, 6, 10, and 14 Tang teaches a method, apparatus, medium, and system further comprising requesting a burst mode access to the memory (burst mode lines 6-7, paragraph [0029]), the burst mode access request defining the multiple addresses (lines 9 – 14, paragraph [0022]), and, in response to the burst mode access request, sending the plurality of consecutive requests to access the memory (FIFO memory circuitry includes (addresses) storage locations for control bits and data bits, lines 6 – 7, paragraph [0034]), each of the plurality of requests specifying one of the multiple memory addresses (delivered as small bursts, lines 15 – 16, paragraph [0022]).

5. Tang modified by the teachings of Rosenthal as applied in claim 1 above as per claims 3, 7, 11, and 15 Tang teaches a method, apparatus, medium and system wherein accessing the memory if the decoded address is the first address includes

Art Unit: 2182

reading from the memory (read cycles, paragraph [0026], Reads from FIFO memory, paragraph [0033]).

6. Tang modified by the teachings of Rosenthal as applied in claim 1 above as per claims 4, 8, 12, and 16 Tang teaches a method, apparatus, medium and system wherein accessing the memory if the decoded address is the first address includes writing to the memory said step of accessing is write accessing (write cycles, paragraph [0026], written into the FIFO memory, paragraph [0042]).

7. Tang modified by the teachings of Rosenthal as applied in claim 1 above as per claim 17, 18 and 20, Tang teaches a method and device wherein the memory is a first-in-first-out memory (written into the FIFO memory, paragraph [0042]).

8. Tang modified by the teachings of Rosenthal as applied in claim 1 above as per claim 19, Rosenthal teaches an apparatus wherein the at least one decoder receives from the bus a plurality of consecutive requests to access the memory, each of the consecutive requests specifying one of the particular plurality of distinct addresses (receiving commands for addresses, column 4, lines 63 – 67).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Examiner makes note of references are cited to further show the

Art Unit: 2182

state of the art as it pertains to the applicants invention, teaching burst modes for CPU and FIFO inclusively.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aurangzeb Hassan whose telephone number is (571)272-8625. The examiner can normally be reached on Monday - Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571)272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH

  
FRITZ FLEMING  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100  
9/18/2006